APPENDIX A

BENCHMARK CHARACTERISTIC ANALYSIS OF DATA FROM FIXED STATIONS IN THE WHITEWATER WATERSHED

Station: WHW-22

	Valid N	Mean	Confid -95.000%	Confid +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	23	224.087	212.2272	235.9468	222	5154	149	275	211	245	126	34	752.1739	27.42579	5.718672	-0.63579	0.481337	1.435403	0.934764
Ammonia (mg/l as N)	23	0.078261	0.049975	0.106547	0.05	1.8	0.05	0.3	0.05	0.05	0.25	0	0.004279	0.065411	0.013639	2.512584	0.481337	5.904297	0.934764
BOD (mg/l)	22	0.909091	0.574515	1.243667	0.5	20	0.5	3.4	0.5	1.1	2.9	0.6	0.569437	0.754611	0.160884	2.163468	0.490962	4.834479	0.95278
COD (mg/l)	0																		
Cyanide (mg/l)	2	0.005			0.005	0.01	0.005	0.005			0		0	0	0				
Nitrate (mg/l as N)	23	2.53913	2.1908	2.887461	2.7	58.4	1	4.4	2	3	3.4	1	0.648854	0.805515	0.167961	0.277739	0.481337	0.438032	0.934764
Total Phosphorus (mg/l as P)	23	0.050217	0.026492	0.073943	0.04	1.155	0.015	0.27	0.015	0.07	0.255	0.055	0.00301	0.054865	0.01144	3.164775	0.481337	12.1147	0.934764
Total Solids (mg/l)	23	371.6522	355.5222	387.7821	368	8548	309	472	351	395	163	44	1391.328	37.30051	7.777694	0.614783	0.481337	1.333918	0.934764
Suspended Solids (mg/l)	23	20.26087	5.794072	34.72767	8	466	2	157	4	21	155	17	1119.202	33.45447	6.975739	3.428395	0.481337	13.38767	0.934764
Dissolved Solids (mg/l)	6	322.1667	296.5861	347.7472	330	1933	286	348	299	340	62	41	594.1667	24.37553	9.95127	-0.73419	0.845154	-1.17438	1.740777
Sulfate (mg/l)	6	32.66667	28.99114	36.34219	32.5	196	29	39	30	33	10	3	12.26667	3.50238	1.429841	1.295703	0.845154	2.31185	1.740777
TKN (mg/l as N)	6	0.383333	0.304335	0.462332	0.4	2.3	0.3	0.5	0.3	0.4	0.2	0.1	0.005667	0.075277	0.030732	0.31257	0.845154	-0.10381	1.740777
E. coli (CFU/100ml)	22	416.3636	-154.799	987.5258	30	9160	5	6000	10	190	5995	180	1659496	1288.214	274.6482	4.272906	0.490962	18.93908	0.95278
TOC (mg/l)	6	2.05	1.795093	2.304907	2.05	12.3	1.8	2.3	1.8	2.3	0.5	0.5	0.059	0.242899	0.099163	-2.1E-16	0.845154	-2.90434	1.740777
Hardness (mg/l)	23	277	261.7887	292.2113	284	6371	206	340	258	304	134	46	1237.364	35.17618	7.334741	-0.50496	0.481337	-0.12037	0.934764
Chloride (mg/l)	6	21	17.36465	24.63535	21	126	16	26	19	23	10	4	12	3.464102	1.414214	4.1E-16	0.845154	-0.00833	1.740777
Dissolved Oxygen (mg/l)	20	10.83	10.02755	11.63245	10.5	216.6	8.4	13.88	9.42	11.995	5.48	2.575	2.939832	1.714594	0.383395	0.486328	0.512103	-0.78251	0.992384
pH	20	8.1435	8.025537	8.261463	8.17	162.87	7.4	8.46	8.045	8.325	1.06	0.28	0.063529	0.25205	0.05636	-1.52473	0.512103	3.081189	0.992384
Copper (ug/l)	6	2.833333	0.691182	4.975485	2	17	2	7	2	2	5	0	4.166667	2.041241	0.833333	2.44949	0.845154	6	1.740777
Iron (ug/l)	6	399.6667	81.32271	718.0106	425	2398	56	860	92	540	804	448	92019.87	303.3478	123.8412	0.341005	0.845154	-0.59863	1.740777
Zinc (ug/l)	6	4.791667	0.820219	8.763114	3.475	28.75	2.25	12	2.25	5.3	9.75	3.05	14.32142	3.784365	1.54496	1.801291	0.845154	3.391885	1.740777

Station: WHE-27

	Valid N	Mean	Confid -95.000%	Confid +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	25	254.8	245.8084	263.7916	253	6370	207	304	241	263	97	22	474.5	21.78302	4.356604	0.291587	0.463684	0.637665	0.901721
Ammonia (mg/l as N)	25	0.062	0.04831	0.07569	0.05	1.55	0.05	0.2	0.05	0.05	0.15	0	0.0011	0.033166	0.006633	3.421796	0.463684	12.92384	0.901721
BOD (mg/l)	24	1.091667	0.834387	1.348946	1.1	26.2	0.5	2.4	0.5	1.45	1.9	0.95	0.371232	0.609288	0.12437	0.618077	0.472261	-0.68857	0.917777
COD (mg/l)	25	10.716	7.442401	13.9896	8.6	267.9	2.5	38	7.3	11	35.5	3.7	62.89473	7.93062	1.586124	2.044196	0.463684	5.135347	0.901721
Cyanide (mg/l)	22	0.005227	0.004842	0.005613	0.005	0.115	0.005	0.009	0.005	0.005	0.004	0	7.6E-07	0.000869	0.000185	4.302227	0.490962	19.07536	0.95278
Nitrate (mg/l as N)	25	3.544	3.23007	3.85793	3.5	88.6	2.2	4.9	2.9	4.1	2.7	1.2	0.5784	0.760526	0.152105	0.043911	0.463684	-0.7717	0.901721
Total Phosphorus (mg/l as P)	25	0.0936	0.073567	0.113633	0.1	2.34	0.015	0.22	0.05	0.12	0.205	0.07	0.002355	0.048531	0.009706	0.547826	0.463684	0.546933	0.901721
Total Solids (mg/l)	25	485.76	465.478	506.042	487	12144	393	567	451	519	174	68	2414.273	49.13526	9.827051	-0.29207	0.463684	-0.81743	0.901721
Suspended Solids (mg/l)	25	18.2	2.368853	34.03115	8	455	2	194	2	19	192	17	1470.917	38.35253	7.670506	4.351885	0.463684	20.26137	0.901721
Dissolved Solids (mg/l)	4	445.5	340.6683	550.3317	447	1782	385	503	388.5	502.5	118	114	4340.333	65.88121	32.9406	-0.00957	1.014185	-5.94249	2.618615
Sulfate (mg/l)	4	43.25	13.18823	73.31177	41.5	173	22	68	31.5	55	46	23.5	356.9167	18.89224	9.446119	0.548906	1.014185	1.654822	2.618615
TKN (mg/l as N)	4	0.45	0.358131	0.541869	0.45	1.8	0.4	0.5	0.4	0.5	0.1	0.1	0.003333	0.057735	0.028868	3.7E-19	1.014185	-6	2.618615
E. coli (CFU/100ml)	24	1003.333	368.8937	1637.773	420	24080	10	6200	105	950	6190	845	2257432	1502.475	306.6915	2.389627	0.472261	5.891695	0.917777
TOC (mg/l)	4	4.675	-3.81819	13.16819	2.55	18.7	1	12.6	1.65	7.7	11.6	6.05	28.48917	5.337524	2.668762	1.876928	1.014185	3.630594	2.618615
Hardness (mg/l)	25	333.48	317.8297	349.1303	340	8337	244	394	320	357	150	37	1437.51	37.91451	7.582902	-0.95973	0.463684	1.03515	0.901721
Chloride (mg/l)	5	42.402	5.191668	79.61233	38	212.01	0.01	75	32	67	74.99	35	898.088	29.96812	13.40215	-0.43146	0.912871	-0.65886	2
Dissolved Oxygen (mg/l)	21	11.06	10.19213	11.92787	11.32	232.26	8.3	14.85	9.3	12.1	6.55	2.8	3.63505	1.906581	0.41605	0.408754	0.501195	-0.59861	0.971941
pH	21	8.048095	7.928832	8.167358	8.05	169.01	7.6	8.54	7.84	8.24	0.94	0.4	0.068646	0.262004	0.057174	0.020075	0.501195	-0.68901	0.971941
Copper (ug/l)	7	5.657143	1.987607	9.326678	4.8	39.6	2	13	2	8.8	11	6.8	15.74286	3.967727	1.49966	1.209047	0.793725	0.946874	1.587451
Iron (ug/l)	4	260.5	-61.3876	582.3876	240	1042	52	510	101	420	458	319	40921	202.2894	101.1447	0.439238	1.014185	-1.68105	2.618615
Zinc (ug/l)	7	15.47857	0.543103	30.41404	10	108.35	2.25	50	6.6	20	47.75	13.4	260.7949	16.14914	6.103803	2.08444	0.793725	4.625428	1.587451